#8/Letter
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Date:	April 30, 2002	From.	John A. Sopp
To:	Examiner Souw Group Art Unit 2881 USPTO	MILLEN, WHITE, ZELANO & BRANIGAN, P.C. Arlington Courthouse Plaza I 2200 Clarendon Boulevard, Suite 1400 Arlington, VA 22201 (U.S.A.) Facsimile: 703-243-6410	
Facsimile No.:	703-746-8594	Writer's Direct Dial:	703-812-5315
Telephone No.:		Writer's Internet Address:	sopp@mwzb.com
Re:	U.S. Patent Application No. 10/031,081 Our Ref (Attny Docket): TAKIT-163		

Total No. of Pages: _3_ ; if you do not receive all pages, please call 703-243-6333

Dear Mr. Souw:

Pursuant to our recent phone conversation, attached is a copy of the questions I sent to

the client and their response. Hopefully, this will be helpful to further understanding of the

invention. I am also awaiting copies of the two mentioned articles and will forward them as

soon as they are received.

Please enter
as paper no. #8
BES 05/01/03

Very truly yours,

John A. Sopp

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Date: March 24, 2003	**From:** **JOHN A. SOPP**
To: Takıta, Shimoda & Associates 7 Fl. Okano Bldg. 41-12, Kabukicho 2-Chome Shinjuku-ku, Tokyo 160-0021 JAPAN	**MILLEN, WHITE, ZELANO & BRANIGAN, P.C.** Arlington Courthouse Plaza 1 2200 Clarendon Blvd., Suite 1400 Arlington, VA 22201 (U.S.A.) (Fax: 703-243-6410)
Facsimile No.: 080	**Writer's Direct Dial:**
Telephone No.:	**Writer's Internet Address:** sopp@mwzb.com

Re: U.S. Patent Application No. 10/031,081
METHOD OF DETERMINING STRUCTURE OF SOFT MATERIAL
Your Ref: F01-247US
Our Ref: TAKIT-163

Total No. of Pages: **1**; if you do not receive all pages, please call (703) 243-6333

Dear Colleagues:

The examiner contacted us with some questions for which we require technical input from the client.

(1)   What feature of the invention makes it possible to determine from the weak-scattering image obtained from the soft material that a plurality of crystallographically significant directions were obtained and what they are without making the type of trial and error process of the Direct Method?

(2)   What unique feature of the invention makes it possible to obtain the phases directly?

(3)   See page 8, lines 13-16, of the original specification; what is meant by the statement that the diffraction patterns of low spatial resolution are "with phases" and those of high spatial resolution "without phases." Should the 0.3 and 0.1 mm values be in term of mm^{-1} ?

Best regards,

John A. Sopp

JAS/slm
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John Sopp

From: takipat@yahoo co jp
Sent: Wednesday, April 16, 2003 12:06 AM
To: John Sopp
Subject: Re F01-247US(TAKIT-163), answer for your Facsimile

Dear Mr. A Sopp:
Thank you for your facsimile letter of March 24, 2003. The
inventor's answer for examiner's questions is as follows.
"1) Using the method we have developed, we could solve
uniquely for an example three-dimensional(3d-) structure
of silica mesoporous crystal of MCM-48. The structural
solution is that amorphous silica wall with thickness of
about 12 Angstrom follows exactly 3d-periodic minimal
surface known as a gyroid surface in Mathematic, and
therefore MCM-48 contains independent and interwoven
3d-networks of mesoporous channels. We can produce
3d-networks of carbon or Pt networks in the channels. We
can of course solve the 3d-networks uniquely by the method
we developed. In diffraction experiment, we can not find
any differences between template silica mesoporous MCM-48
and the carbon or Pt 3d-networks, which is well known as
The Babine's Principle, because the differences lie only
in phases incrystal structure factors. The structural
solutions of MCM-48and the 3d- networks are two of
thousands of possible solutions, which will be obtained
only by diffraction information.
By this example, the value of our development is unique
and powerful
You can find more in my following papers,
(1) Structural Study of Mesoporous MCM-48 and Carbon
Networks Synthesized in
the Spaces of MCM-48 by Electron Crystallography, M.
Kaneda, T Tsubakiyama, A Carlsson, Y. Sakamoto, T.
Ohsuna, O. Terasaki, S H. Joo andR. Ryoo
J. Phys. Chem. B106 (2002), 1256-1266.
(2) EM study of novel Pt-nanowires synthesized in the
spaces of silica mesoporous materials,
    O. Terasaki, Z. Liu, T. Ohsuna, H. J. Shin & R. Ryoo,
Microsc. Microanal., 8 (2002), 35-39.

2) "0 3 and 0.1 mm" should be read as"0.3 and 0 1 nm-1"
wherein "nm"is nanometer."
Is this sufficient information for you ?
If you need further information, let us know it
concretely
Best Regards
Seiki TAKITA

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